DRAFT
FIRST COAST SERVICE OPTIONS
MEDICARE PART B
LOCAL COVERAGE DETERMINATION

LCD Number

0145T

LCD Database ID Number

DL23145 – Florida
DL23147 – Connecticut

Contractor Name

First Coast Service Options, Inc.

Contractor Number

00590 - Florida
00591 - Connecticut

Contractor Type

Carrier

LCD Title

Computed Tomographic Angiography of the Chest, Heart and Coronary Arteries

AMA CPT Copyright Statement

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CMS National Coverage Policy

CMS Manual System, Pub. 100-8, Program Integrity Manual, Chapter 13, Section 5.1 (http://www.cms.hhs.gov/manuals/downloads/pim83c13.pdf

Primary Geographic Jurisdiction

Florida
Connecticut

Secondary Geographic Jurisdiction

N/A

CMS Region

Region IV – Florida
Region I – Connecticut

CMS Consortium

Southern - Florida
Northeastern - Connecticut

Original Determination Effective Date

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Original Determination Ending Date

N/A

Revision Effective Date

N/A

Revision Ending Date

N/A

Indications and Limitations of Coverage and/or Medical Necessity

Multislice or Multidetector Computed Tomography (MDCT) angiography with its advanced spatial resolution has opened up new possibilities in the imaging of the major vessels of the chest, including aorta, pulmonary arteries, and coronary arteries.

MDCT technology for cardiac and coronary artery assessment requires thin (less than 1 mm) slices, 0.5 to 0.75 mm reconstructions, multiple simultaneous images (e.g. 40-64 or more slices) and cardiac gating (often requiring beta blockers for ideal heart rate). There is significant post processing, depending on the number of slices for image generation. For coronary artery imaging, the resulting images show a high correlation with stenotic lesions noted on diagnostic cardiac catheterization but more importantly, with atheromas on intracoronary ultrasound. Additionally, the technique may be helpful in defining the vascularity of chest or lung lesions.

Indications

Medicare will consider MDCT angiography of the chest for non-cardiac assessment (71275) medically reasonable and necessary for the following signs or symptoms of disease:

• Assessment of a symptomatic patient when presentation is suspicious for pulmonary emboli;

• Abnormalities of the thoracic vasculature such as aortic dissection, aortic aneurysm, pulmonary arterio-venous malformation (AVM) and other abnormalities of the systemic circulation, excluding the heart;

• Assessment of suspected congenital anomalies of the heart or great vessels; and

• Assessment of cardiac, mediastinal or lung parenchymal lesions, the vascularity of which is unknown or ill defined, but is critical to the diagnosis.

Medicare will consider MDCT angiography of the chest for cardiac assessment medically reasonable and necessary for the following signs or symptoms of disease:

• Cardiac evaluation of a patient with chest pain syndrome (e.g. anginal equivalent, angina), who is at a low to moderate risk for coronary artery disease (CAD), if use of MDCT is expected to avoid performing diagnostic cardiac catheterization. MDCT and coronary angiography are not expected to be performed on the same patient for diagnostic purposes prior to the application of anticipated therapy. (If a high pre-test probability of disease exists, as if the patient has known CAD, it is assumed the patient would go to coronary angiography as the definitive test, where possible angioplasty and/or stenting could be performed at the same time).

• Assessment of suspected congenital anomalies of coronary circulation.

• Assessment of symptomatic patients with equivocal stress test results, with or without cardiac imaging, if MDCT is expected to avoid performing diagnostic coronary angiography. (Again, if a high pre-test probability of disease exists, as if the patient has known CAD, it is not expected that CT coronary angiography would be done in addition to a subsequent coronary catheterization and angiogram.)

• Evaluation of pulmonary veins prior to arrhythmia ablation procedures

• Evaluation of cardiac veins prior to insertion of biventricular pacemaker

Limitations

• The test is never covered for screening, i.e., in the absence of signs, symptoms or disease.

• The test is never covered for patients with stable coronary artery disease without any significant change in signs or symptoms.

• The selection of the test should be made within the context of other testing modalities so that the resulting information facilitates the management decision, and does not merely add an additional layer of testing. The test may be denied, on post-pay review, as not medically necessary when used for cardiac evaluation of a patient with extensive disease where there is a pre-test knowledge of extensive calcification that would diminish the interpretive value.

• Coverage of this modality for coronary artery assessment is limited to devices that process thin, high-resolution slices (0.75 mm or less) The multidetector scanner must have at least 32 slices per second capability**.** For non-cardiac thoracic assessment, the multidetector scanner may have a capability of less than 16 slices.

• The administration of beta-blockers and/or other medications and the monitoring of the patient by a physician during the MDCT are not separately payable services.

• All studies must be ordered by a physician or a qualified non-physician practitioner**.** A physician or qualified non-physician provider must be present during testing whenever cardioactive agents or contrast agents are administered (direct physician supervision). Ideally, this supervising physician will be experienced in this procedure and ACLS-certified.

• Electron Beam Technology provides high temporal resolution and enables quantitative assessment of the coronary artery calcium, but because of limited spatial resolution as a result of the limited z axis resolution (slice thickness=3.0 mm), it does not permit direct visualization in multi-reformation of the whole coronary system. Therefore, CT angiography of the heart is not considered medically necessary when performed with an EBT scanner.

The CMS Manual System, Pub. 100-8, Program Integrity Manual, Chapter 13, Section 5.1 (http://www.cms.hhs.gov/manuals/downloads/pim83c13.pdf outlines that “reasonable and necessary" services are "ordered and/or furnished by qualified personnel." Services will be considered medically reasonable and necessary only if performed by appropriately trained providers. This training and expertise must have been acquired within the framework of an accredited residency and/or fellowship program in the applicable specialty/subspecialty or must reflect extensive continued medical education activities. If these skills have been acquired by way of continued medical education, the courses must be comprehensive, offered or sponsored or endorsed by an academic institution in the United States and/or by the applicable specialty/subspecialty society in the United States, and designated by the American Medical Association (AMA) as Category 1 Credit.

Acceptable levels of competence, are such as defined by the American College of Cardiology (ACC)/American Heart Association (AHA) Clinical Competence Statement on Cardiac Imaging with Computed Tomography and Magnetic Resonance (2005) and the American College of Radiology (ACR) Clinical Statement on Noninvasive Cardiac Imaging (2005).

Coverage Topic

Diagnostic Tests and X-Rays

CPT/HCPCS Codes

71275 Computed tomographic angiography, chest, without contrast material(s), followed by contrast material(s) and further sections, including image post-processing

0145T Computed tomography, heart, without contrast material followed by contrast material(s) and further sections including cardiac gating and 3D image post processing; cardiac structure and morphology

0146T computed tomographic angiography of coronary arteries (including native and anomalous coronary arteries, coronary bypass grafts); without quantitative evaluation of coronary calcium

0147T computed tomographic angiography of coronary arteries (including native and anomalous coronary arteries, coronary bypass grafts); with quantitative evaluation of coronary calcium

0148T cardiac structure and morphology and computed tomographic angiography of coronary arteries (including native and anomalous coronary arteries, coronary bypass grafts), without quantitative evaluation of coronary calcium

0149T cardiac structure and morphology and computed tomographic angiography of coronary arteries (including native and anomalous coronary arteries, coronary bypass grafts), with quantitative evaluation of coronary calcium

0150T cardiac structure and morphology in congenital heart disease

0151T Computed tomography, heart without contrast material followed by contrast material(s) and further sections, including cardiac gating and 3D image post processing, function evaluation (left and right ventricular function, ejection fraction and segmental wall motion)

ICD-9 Codes that Support Medical Necessity

The following codes will be considered reasonable and necessary for CT Angiography of the chest for non-cardiac indications (CPT code 71275):

164.1	Malignant neoplasm of heart
212.7	Benign neoplasm of heart
239.1	Neoplasms of unspecified nature, respiratory system
415.0 - 415.19	Acute pulmonary heart disease
416.0 - 416.9	Chronic pulmonary heart disease
417.0 - 417.9	Other diseases of pulmonary circulation
435.2	Occlusion and stenosis of vertebral artery
441.00	Dissection of aorta, unspecified site
441.01	Dissection of aorta, thoracic
444.1	Arterial embolism and thrombosis of thoracic aorta
518.5	Pulmonary insufficiency following trauma and surgery
518.81	Acute respiratory failure
518.82	Other pulmonary insufficiency, not elsewhere classified
747.10 - 747.11	Coarction of aorta
747.20-747.29	Other anomalies of aorta
747.3	Congenital anomalies of pulmonary artery
747.40-747.49	Anomalies of great veins
748.9	Unspecified anomaly of respiratory system
786.05	Shortness of breath
786.3	Hemoptysis
786.50-786.59	Chest pain
786.6	Swelling, mass, or lump in chest
794.2	Nonspecific abnormal results of function study of pulmonary system

The following codes will be considered reasonable and necessary for CT Angiography of the Chest for Cardiac indications for Category III codes 0145 T, 0146T, 0147T, 0148T, 0149T, 0150T, and 0151T – (add-on code for cardiac function).

402.00 - 402.91	Hypertensive heart disease
411.1	Intermediate coronary syndrome
412	Old myocardial infarction
413.0 - 413.9	Angina
414.00 - 414.07	Coronary atherosclerosis
414.10 - 414.19	Aneurysm and dissection of heart
414.8	Other specified forms of chronic ischemic heart disease
414.9	Chronic ischemic heart disease, unspecified
420.0 - 420.99	Acute pericarditis
745.0 - 745.9	Bulbus cordis anomalies and anomalies of cardiac septal closure
746.00 - 746.9	Other congenital anomalies of heart
747.40-747.49	Anomalies of great veins

786.05	Shortness of breath
786.50	Chest pain, unspecfied
786.51	Precordial pain
786.59	Other chest pain
794.30	Unspecified abnormal function study of cardiovascular system
794.31	Abnormal electrocardiogram ECG, EKG

Diagnoses that Support Medical Necessity

N/A

ICD-9 Codes that DO NOT Support Medical Necessity

N/A

Diagnoses that DO NOT Support Medical Necessity

N/A

Documentation Requirements

The documentation of the study requires a formal written report, with clear identifying demographics, the name of the interpreting provider, reason for the test, an interpretive report and copies of images. The computerized data with image reconstruction should also be maintained.

The medical record must contain documentation that fully supports the medical necessity of the procedure performed. This documentation includes, but is not limited to relevant medical history, physical examination, and results of pertinent diagnostic tests or procedures. This entire documentation- not just the test report or the finding /diagnosis on the order- must be available to Medicare upon request.

Utilization Guidelines

It is expected that these services would be performed as indicated by current medical literature and/or standards of practice. When services are performed in excess of established parameters they may be subject to review for medical necessity.

Sources of Information and Basis for Decision

ACC/AHA Clinical Competence statement on Cardiac Imaging with Computed Tomography and Magnetic Resonance (2005) *Journal of the American College of Cardiology.* 46 (2) 383-402.

ACR Practice Guideline for the performance and interpretation of CT angiography (CTA).

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Advisory Committee Notes

This policy does not reflect the sole opinion of the contractor or Contractor Medical Director. Although the final decision rests with the contractor, this policy was developed in cooperation with advisory groups, which includes representatives from the Florida and Connecticut Society of Cardiology, and the Florida and Connecticut Society of Radiology.

Start Date of Comment Period

05/19/2006

End Date of Comment Period

07/10/2006

Start Date of Notice Period

MM/DD/YYYY

Revision History

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Related Documents

N/A

LCD Attachments

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